

Rewrite claim 10 as follows:

10. (Amended) A method of performing a medical procedure using the magnet of claim 5 to project a magnetic field into a patient to control a magnetic medical element inside the patient.

Cancel claims 11-30 without prejudice.

Add new claims 31-51

31. (New) A permanent magnet in which the magnetization direction varies with location to optimize the magnetic field at a selected point in a selected direction, the magnetization direction varying in three dimensions so that the magnetization at each location in the magnet is in the direction that substantially optimizes the desired magnetic field property at a selected point in the selected direction.

32. (New) A permanent magnet in which the magnetization direction varies with location to optimize the magnetic field at a selected point in a selected direction, the magnetization direction varying in two dimensions so that the magnetization at each location in the magnet is in the direction that substantially optimizes the desired magnetic field property at a selected point in the selected direction.

33. (New) A permanent magnet in which the magnetization direction varies with location to optimize the magnetic field at a selected point in a selected direction, the magnet comprising a plurality of permanent magnet segments, the magnetization direction of each permanent magnet segment varying in three dimensions so that the magnetization direction of each permanent magnet segment is in the direction that substantially optimizes the magnetic field at the selected point in the selected direction.

34. (New) The permanent magnet according to claim 34 wherein at least a portion of the surface of the magnet conforms to a surface of constant contribution to the desired magnetic field at the selected location.

35. (New) The permanent magnet according to claim 34 wherein the direction of magnetization throughout each permanent magnet segment is constant.

36. (New) The permanent magnet according to claim 35 wherein the direction of magnetization throughout each permanent magnet segment is the direction which, at the center of mass of the segment, provides the maximum contribution to the desired property.

37. (New) The permanent magnet according to claim 35 wherein the direction of magnetization throughout each permanent magnet segment is the direction which, at the effective magnet center, provides the maximum contribution to the desired property.

38. (New) The permanent magnet according to claim 35 wherein the size and position of the permanent magnet segments is selected so that the difference in the direction of magnetization direction between adjacent magnet segments is less than about 45°.

39. (New) The permanent magnet according to claim 38 wherein the size and position of the permanent magnet segments is selected so that the difference in the direction of magnetization direction between adjacent magnet segments is less than about 30°.

40. (New) The permanent magnet according to claim 35 wherein the magnetization direction throughout each permanent magnet segment is not constant.

41. (New) A permanent magnet in which the magnetization direction varies with location to optimize a the magnetic field at a selected point in a selected direction, the magnet comprising: a plurality of permanent magnet segments, the magnetization direction of each permanent magnet segment varying in two dimensions so that the magnetization direction of each permanent magnet segment is in the direction that substantially optimizes the magnetic field at the selected point in the selected direction.

42. (New) The permanent magnet according to claim 41 wherein at least a portion of the surface of the magnet conforms to a surface of constant contribution to the desired magnetic field at the selected location.

43. (New) The permanent magnet according to claim 41 wherein the direction of magnetization throughout each permanent magnet segment is constant.

44. (New) The permanent magnet according to claim 43 wherein the direction of magnetization throughout each permanent magnet segment is the direction which, at the center of mass of the segment, provides the maximum contribution to the desired property.

45. (New) The permanent magnet according to claim 43 wherein the direction of magnetization throughout each permanent magnet segment is the direction which, at the effective magnet center, provides the maximum contribution to the desired property.

46. (New) The permanent magnet according to claim 43 wherein the size and position of the permanent magnet segments is selected so that the difference in the direction of magnetization direction between adjacent magnet segments is less than about 45°.

47. (New) The permanent magnet according to claim 46 wherein the size and position of the permanent magnet segments is selected so that the difference in the direction of magnetization direction between adjacent magnet segments is less than about 30°.

48. (New) The permanent magnet according to claim 43 wherein the magnetization direction throughout each permanent magnet segment is not constant.